

REMARKS

Upon entry of the present Amendment, the claims in the application remain claims 1-10, of which claims 1 and 4 are independent.

Claim 1 has been amended to further define the invention, defining that the end of the major axis of the 1/4 oval shape of the bar-shaped light guide is chamfered at a non-perpendicular angle to the plane parallel to the major axis of the 1/4 oval.

Applicant respectfully submits that the above amendment is fully supported by the original disclosure, including the drawings. Additionally, applicant respectfully submits that no new matter is introduced by the above amendment.

Rejection Under 35 USC §102(e)

The Examiner has rejected claim 1 under 35 USC §102(e) as being anticipated Fujimoto et al. (US Patent 6,259,082), set forth at item 4 of the Office Action. It is the Examiner's position that Fujimoto's light guide as shown in his Fig 23 meets the limitations of claim 1.

Applicant's Response

Upon careful consideration, and in light of the above amendments to claim 1, applicant respectfully submits that such rejection is overcome and that present claim 1 is clearly patentably distinct over the Fujimoto reference, because Fujimoto does not disclose or suggest a bar-shaped light guide having a cross sectional shape in the direction perpendicular to its longitudinal direction which is substantially 1/4 oval of which the end of the major axis side is chamfered at a non-perpendicular angle to the plane parallel to the major axis of the 1/4 oval, and a light scattering plane provided with light scattering patterns on a plane formed by chamfering the end of the major axis side of said 1/4 oval, as now required by claim 1.

While Fujimoto appears to disclose, in his Fig. 23, a bar-shaped light guide having a cross sectional shape in the direction perpendicular to its longitudinal direction which is substantially 1/4 oval, the end of the major axis side of the 1/4 oval is not chamfered (beveled), but is truncated perpendicular to the major axis 10D'. This distinction is emphasized by the above amendment and reflects an important advantage of the invention as discussed throughout the application.

Based on the foregoing, applicant respectfully submits that the rejection of claim 1 under 35 USC 102(e) as anticipated by Fujimoto et al. is overcome, and accordingly it is respectfully requested that such rejection be reconsidered and withdrawn.

Rejection Under 35 USC §103(a)

1. The Examiner has also rejected claims 2-4 and 10 under 35 USC §103(a) as being unpatentable over Fujimoto et al, as set forth at item 6 of the Office Action. It is the Examiner's position that while Fujimoto may not teach features of these claims, it would have been obvious to provide Fujimoto's apparatus with such features, in order for the light guide to achieve the 1/4 oval shape, to illuminate scattered light onto a document, to improve image pickup ability, etc.

Applicant's Response

Upon careful consideration, applicant respectfully traverses such rejection, and submits that claims 2-4 and 10 based on those reasons discussed above in relation to claim 1, and based on the following.

Initially, applicant respectfully submits that the feature of claim 2 (the plane parallel to the major axis direction of said oval is chamfered to include a focal position) is not disclosed or suggested by Fujimoto, nor is such feature ever shown to be known or obvious for the light guide to achieve the 1/4 oval shape, as alleged by the Examiner. As discussed above, Fujimoto's light-leading member does not include a chamfered surface as claimed, such that can be no relation between a focal position and a chamfered surface in Fujimoto's member. Again, this distinction is very significant as discussed in the present specification.

Further regarding claim 3, it is noted that the last feature therein (said light scattering patterns are provided so that an area for forming the light scattering patterns is larger in proportion to the distance from the light-emitting means) is not disclosed by Fujimoto, whereas the Examiner has otherwise indicated that a similar feature of claim 9 is allowable.

Regarding independent claim 4, applicant respectfully submits that Fujimoto's image reading apparatus does not include a light guide section and a condensing section arranged in

contact with each other or closely arranged,, nor would it ever be obvious to hypothetically provide Fujimoto's apparatus with such a feature based on his actual teachings and the other evidence of record. For example, Fujimoto's flat glass plate 70 does not condense light, while persons skilled in the art would not consider it obvious to modify the plate 70 to condense light given that the document being read/imaged is *directly supported* on the plate so that any such modification would lead to distortion in the image of the document.

Regarding claim 10, applicant respectfully submits that the feature defined at its last clause, "an optical axis of said lens array is arranged in an area with less change of light intensity relative to elevation of the document", provides a significant and unobvious advantage over conventional systems (including Fujimoto) as explained throughout the application, including the paragraph at page 6, lines 7-15 of the application, with reference to Fig. 4. This advantageous feature is not remotely addressed or suggested by Fujimoto or any other evidence of record.

Based on the foregoing, applicant respectfully submits that the rejection of claims 2-4 and 10 under 35 USC 103(a) as unpatentable over Fujimoto et al. is overcome, and accordingly it is respectfully requested that such rejection be reconsidered and withdrawn.

2. The Examiner has also rejected claims 5-8 under 35 USC §103(a) as being unpatentable over Fujimoto in view of Yamashita et al. (US Patent 5,182,455), as set forth at item 7 of the Office Action.. It is the Examiner's position that while Fujimoto may not teach features of dependent claims 5-8, it would been obvious to provide Fujimoto's apparatus with such features based on teachings of Yamashita or to obviate the need for a plurality of light emitting devices.

Applicant's Response

Upon careful consideration, applicant respectfully traverses such rejection, and submits that claims 5-8 are clearly patentably distinct over the applied references, based on those reasons discussed above in relation to claim 4, because the proposed modification of Fujimoto's system relative to specific teachings of Yamashita as proposed by the Examiner is improperly based on a suggestion coming entirely from the Examiner (guided by impermissible hindsight of applicant's disclosure), rather than any teaching or suggestion of the references themselves, and because Yamashita also fails to disclose or suggest features of the invention set forth in claims 5-8.

Relative to the proposed modification, Yamashita's sensor includes the acrylic condensing light guide 17 disposed immediately adjacent the flat glass plate 3 supporting a document being imaged, while the reflecting mirror surface 13 is disposed between the light guide 17 and the light source 5. This is *directly opposite* to the arrangement of the light guiding and condensing sections as set forth in claims 5, 6 and 8. Correspondingly, applicant respectfully submits that persons skilled in the art would not consider it obvious to modify Fujimoto's image reading apparatus to include the features of claims 5, 6 and 8 based on Yamashita, because Yamashita teaches opposite to the claimed features.

On the other hand, neither Fujimoto nor Yamashita disclose a light guide casing (singular) covering both a light guide section and a light condensing section as claimed (noting that Yamashita's light guide 17 is disposed between the end of partition wall 23 and glass plate 3).

Correspondingly, applicant respectfully submits that even if Yamashita's light guide 17 were hypothetically combined with Fujimoto's system (e.g., the embodiment shown in Fujimoto's Fig. 24 which generally corresponds to Yamashita's system) the resulting system would still include the reflecting surface disposed between the light guide 17 and the light source, contrary to the claimed invention.

Based on the foregoing, applicant respectfully submits that the rejection of claims 5-8 under 35 USC §103(a) based on the Fujimoto and Yamashita patents is overcome, and accordingly it is respectfully requested that the rejection be reconsidered and withdrawn.

Other Matters in the Office Action

The additional references cited by the Examiner at item 11 of the Office Action (Tabata et al. and Onishi et al.) have been considered by applicant, but it is respectfully submitted that these additional references fail to overcome the deficiencies of the Fujimoto and Yamashita references as discussed above relative to the claimed invention.

Applicant gratefully acknowledges the Examiner's indications at items 8-9 of the Office Action that claim 9 is directed to patentable subject matter. Applicant has not, however, rewritten claim 9 in independent form because claim 4 is also believed to be allowable over the references of

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record.

Conclusion

In conclusion, applicant has overcome the Examiner's rejections as presented in the Office Action; and moreover, applicant has considered all of the references of record, and it is respectfully submitted that the invention as defined by each of the present claims is clearly patentably distinct thereover.

The application is now believed to be in condition for allowance, and a notice to this effect is earnestly solicited.

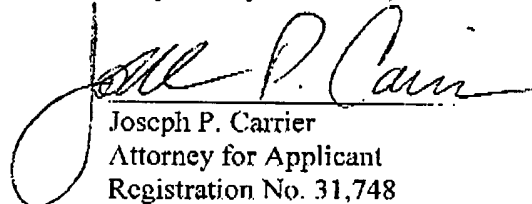
If the Examiner is not fully convinced of all of the claims now in the application, applicant respectfully requests that the Examiner telephonically contact applicant's undersigned representative to expeditiously resolve prosecution of the application.

Favorable reconsideration is respectfully requested.

Applicant's undersigned representative shall be filing in the very near future a Power of Attorney and an associated Statement Under 37 CFR 3.73(b) giving the undersigned representative power to act in this matter.

Customer No. 21828
Carrier, Blackman & Associates, P.C.
24101 Novi Road, Suite 100
Novi, Michigan 48375
17 September 2003

Respectfully submitted,



Joseph P. Carrier
Attorney for Applicant
Registration No. 31,748
(248) 344-4422

CERTIFICATE OF TRANSMISSION

I hereby certify that this correspondence is being transmitted via facsimile to the US Patent & Trademark Office, Art Unit 2878, on 17 September 2003.

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